

### **REMARKS/ARGUMENTS**

Claims 1-30 and 36-40 are pending and have been rejected. Applicants hereby amend claim 6. Applicants submit that the amendments are fairly based on the specification and do not add new matter. Applicants respectfully request reconsideration and allowance of the amended claims 1-30 and 36-40.

Claim 6 stands rejected under 35 U.S.C. §112, first paragraph. In the Examiner's opinion, the specification does not reasonably provide enablement for performing the methods claimed "when said reacting step and said mixing step are carried out simultaneously." Applicants respectfully disagree.

In response, Applicants have amended claim 6 and submit that the amended claim is clearly enabled. Applicants assert that the amendments are fairly based on the specification (see page 14, paragraph 43; also see examples 6, 7, 8, 9 and 10, as well as figures 2 and 3). Applicants submit that the description and examples in the specification demonstrate that the reacting step and the mixing step can be carried out simultaneously.

In the examples, detection of the label from the terminal phosphate-labeled nucleotide is only possible when both the shrimp alkaline phosphatase and the polymerase are present in the reaction. When the polymerase is absent from the reaction, the label can not be detected (example 6 and figure 2). Applicants submit that this is clear evidence that the terminal phosphate-labeled nucleotides are not degraded by the phosphatase, and only labeled polyphosphates are degraded by the phosphatase. This

proves that the terminal phosphate-labeled nucleotides are substantially non-reactive to phosphatase. Therefore, the reacting and the mixing steps can be carried out simultaneously. Applicants also submit that the addition of exonuclease III only amplifies the signal generated from the polymerase/phosphatase reaction and it is not necessary. No exonuclease III was added in the reaction in example 10, yet the reaction worked well. Applicants submit that the rejection under 35 U.S.C. §112, first paragraph, for lack of enablement should be withdrawn.

Claims 1-3, 5, 9, 10, 11 and 13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Rothschild (US Patent No. 5,986,076). Applicants respectfully disagree.

With regard to claim 1, Applicants submit that key differences exist between Rothschild and the current invention. Applicants submit that Rothschild does not conduct a nucleic acid polymerase reaction with “at least one terminal phosphate-labeled nucleotide.” Rather, Rothschild clearly states that the polymerase reaction (i.e. PCR) is carried out using “normal dNTPs” (column 36, line 40-41). Applicants submit that the instant invention clearly defines nucleotide as “phosphate ester of a nucleoside” (page 12, paragraph 35). Applicants submit that “normal dNTPs” of Rothschild are clearly not “terminal phosphate-labeled nucleotide”, used and claimed by the current invention.

Again with regard to claim 1, Applicants submit that Rothschild does not teach “analyzing the labeled polyphosphate”. Rather, Rothschild teaches, as the Examiner stated, analyzing “the PCR product” (column 37 and table). Applicants submit that the current invention clearly described the meaning of “polyphosphate” (see page 14,

paragraph 43 and the scheme immediately follows). Applicants submit that the “polyphosphate” in the current invention is clearly not “the PCR product” of Rothschild.

In view of the foregoing, Applicants respectfully assert that the Examiner’s rejection of claim 1 can not be sustained and should be withdrawn. Rejections to dependent claims 2, 3, 5, 9, 10, 11 and 13 should also be withdrawn.

Claims 5, 7, 8, 15-30 and 36, 37, 38 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rothschild, further in view of Williams (US Patent No. 6,255,083). Applicants respectfully disagree.

In response, Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the dependent claims 5, 7, 8 and 15-30 is improper.

With regard to claims 36, 37 and 38, Applicants submit they relate to the detection and characterization of multiple analytes, but they are similar to claim 1. Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the claims 36, 37 and 38 and the dependent claim 39 is improper.

Applicants submit that for these reasons, the 35 U.S.C. §103(a) rejection of claims 5, 7, 8, 15-30 and 36, 37, 38 and 39 is moot.

Claims 4, 14, 15 and 40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rothschild, further in view of Williams (US Patent No. 6,936,702). Applicants respectfully disagree.

In response, Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the dependent claims 4, 14, 15 and 40 is improper.

With regard to claim 40, Applicants submit it relates to the detection and characterization of multiple analytes, but it is similar to claim 4. Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to claim 40 is improper.

Applicants submit that for these reasons, the 35 U.S.C. §103(a) rejection of claims 4, 14, 15 and 40 is moot.

Claim 12 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Rothschild, further in view of Nikiforov. This reference is neither identified nor provided by the Examiner in this Office action. However, Applicants continue to respectfully disagree.

In response, Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the dependent claim 12 is improper.

Applicants submit that for these reasons, the 35 U.S.C. §103(a) rejection of claim 12 is moot.

Claims 28-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rothschild and Williams (US Patent No. 6,255,083) in view of Mandecki (US Patent No. 6,001,571). Applicants respectfully disagree.

In response, Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the dependent claims 28-30 is improper.

Applicants submit that for these reasons, the 35 U.S.C. §103(a) rejection of claims 28-30 is moot.

Claims 27-28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Rothschild and Williams (US Patent No. 6,255,083) in view of Parker et al. (US Patent No. 5,565,323). Applicants respectfully disagree.

In response, Applicants submit that as discussed above in response to the 35 U.S.C. §102(b) rejection of claim 1, Applicants have presented clear differences between

the instant invention and the Rothschild reference. As such, Applicants submit that inasmuch as claim 1 is allowable, rejection to the dependent claims 27-28 is improper.

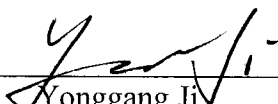
Applicants submit that for these reasons, the 35 U.S.C. §103(a) rejection of claims 27-28 is moot.

Applicants respectfully assert that the claims are in allowable form and earnestly solicit the allowance of claims 1-30 and 36-40.

Early and favorable consideration is respectfully requested.

Respectfully submitted,

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